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U.S. DEPARTMENT OF AGRICULTURE

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American Long Grain Rice

Sales Impact of a Promotional Program in France

ECONOMIC RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

ABSTRACT

French households increased their consumption of rice approximately 3,500 metric tons per year during 1968/69 and 1969/70. The increase was associated with promotional campaigns in France for American long grain rice. All of the increase in total rice purchases could be accounted for by increased purchases of parboiled rice, of which 60 percent could be identified as American rice. The increased purchases were derived from larger middle and upper income households located in urban areas of over 50,000 population and in which the housewife was between 35 and 65 years of age.

Media used in the campaign reached target audiences; however, six of the 12 magazines used would have been about as effective as all 12. Moreover, recall scores and reaction to advertising indicate much improvement can be made in creative as well as media strategy.

Keywords: Marketing, advertising, sales promotion, economics.

PREFACE

An advertising and sales promotion campaign for American long grain rice was initiated in France during the fall of 1968 by the American Rice Council in cooperation with USDA's Foreign Agricultural Service. The long-range objective of the campaign was to expand the market for American long grain rice in France by promoting the use of rice as a vegetable as well as a dessert, with a view to gaining new users and encouraging present users to serve it more often.

The campaign was designed to (1) inform consumers of the desirable characteristics of American long grain rice in dishes other than desserts, (2) stimulate French distributors of American rice to identify and promote it, and (3) establish a quality label for American rice.

The findings of this study concerning the influence of advertising and related sales promotional activities on the shifts in demand are relevant to current conditions and will be useful to management and policymakers in planning future generic promotional activities.

This study of the results of the campaign was conducted by the Economic Research Service as part of a program of research designed to develop basic knowledge of principles related to advertising and sales promotional activities for agricultural products. Basic information of this type aids management of the more than 1,200 commodity promotional organizations (with estimated expenditures of over \$120 million annually) in planning and executing more effective generic promotional campaigns for agricultural products.

Data are presented in terms of marketing years beginning in October and ending in September.

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SUMMARY AND CONCLUSIONS

Purchases of two American brands of parboiled rice by French households rose from 1,845 metric tons in 1966/67 (October-September) to 4,875 metric tons in 1969/70. Most of the increase occurred in 1968/69, following the initiation in 1968 of a promotional program for American long grain rice in France.

Purchases of all rice, including the American brands, were approximately 3,500 metric tons higher in both 1968/69 and 1969/70 than in the 2 years preceding the promotion. This amounted to a 5.5 percent increase in purchases for household consumption over levels of prepromotion years. During both 1968/69 and 1969/70, the increases were derived from increased purchases of parboiled rice. Moreover, during the second year of promotion, purchases of parboiled rice increased an additional 3,500 metric tons, but at the expense of an equal amount of other types of rice.

Before the promotion and in 1968/69, over 50 percent of parboiled rice purchases were identified with the brands of two American firms distributing American long grain rice in France. In 1969/70, the brands of these firms, plus those of a number of French rice millers who agreed to identify their rice as American during the promotion accounted for about 60 percent of parboiled rice purchases.

In 1969/70, even though total purchases of the two American brands were approximately 645 metric tons higher than the year before, the market share declined to about 49 percent. This decline in market share was mainly due to the rapid growth in sales of the leading French firm's brand of parboiled rice, which is not of American origin. During the promotion campaign for American long grain rice, purchases of the French firm's brand for household uses rose from about 700 metric tons annually to approximately 1,600 tons in 1968/69 and 3,100 tons in 1969/70.

The share of sales for household consumption through chain outlets increased from 25 to 32 percent, while the share of cooperatives remained stable at about 11 percent of the total market. In contrast, the market shares of independent outlets, department stores, and minor outlets declined.

The increases in rice purchases were derived primarily from households in the following demographic classifications: (1) Households in which the housewife was between 35 and 65 years old, (2) upper and middle income families in cities of more than 50,000 population, and (3) larger families and families with children less than 16 years old. Sales increases varied considerably among regions. However, regional variations were largely determined by the number of cities with 50,000 or more population in each region.

The promotion included consumer advertising in women's magazines. The advertising was primarily directed to housewives under 50 years of age, of middle socioeconomic classes, and living in urban areas. Consumer advertisements emphasized the use of rice in a variety of dishes and the superior quality of American rice. Advertising in trade papers was designed to inform the trade of the quality characteristics and versatility of American long grain rice, and to obtain trade support of the consumer advertising campaign. The consumer and trade advertising was supported by public relations activities directed to press and trade groups.

Approximately 78 percent of respondents read one or more of the 12 magazines used in the campaigns. Although readership of eight of the 12 magazines was relatively high, ranging from 26 to 43 percent of all respondents, there were only six in which a significant percentage recalled seeing advertisements for rice--from

2.5 to 9.0 percent of all magazine readers. Two-thirds of respondents recalling rice advertisements were able to describe parts of the contents unaided. Only 2 percent mentioned American rice.

Since the promotion campaign appears to have exerted its greatest influence on retail distribution, and since much American rice loses its identity in the marketing system, consideration should be given to alternative promotional strategies. For example, cooperative promotional campaigns with rice millers on a cost sharing basis might be used, or an advertising allowance might be offered to millers and processors who provide proof of advertising and who identify American long grain rice to consumers at point of purchase. Such approaches would provide further inducement for French rice millers to purchase supplies from American shippers rather than from other countries.

Household purchase data for pasta and instant potatoes, which might be competitive with rice, were analyzed to determine whether the rice promotion adversely affected sales. Purchases of pasta were stable throughout the years for which data were available, but purchases of instant potatoes showed a growth pattern similar to that of parboiled rice. Annual purchases in metric tons of instant potatoes and parboiled rice were comparable from 1967/68 through 1969/70. However, the percentage of families buying instant potatoes each month was about twice the percentage buying parboiled rice.

Thus it appears that the promotion campaign for rice did not adversely affect consumption of the other products. However, instant potatoes, a convenience product, may become more competitive with parboiled rice.

AMERICAN LONG GRAIN RICE
Sales Impact of a Promotional Program in France

by

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INTRODUCTION

The American Rice Council, in cooperation with the Foreign Agricultural Service, U.S. Department of Agriculture, initiated an advertising and promotion program for American long grain rice in France during the fall of 1968. The long-range objective of the program was to expand the market for American long grain rice in France by introducing rice as a vegetable among nonusers, and accelerating the frequency of use among occasional users.

The marketing strategy to attain this objective included public relations and advertising through consumer and trade publications. The consumer advertising was directed to housewives under 50 years of age of the middle socioeconomic classes in urban areas through nationwide coverage in women's magazines concentrating in the fall, winter, and spring. Advertisements emphasized the use of rice in a wide variety of dishes and the superior quality of American long grain rice as opposed to other rices. Trade advertising was designed to inform various segments of the trade of the quality and versatility of American long grain rice, and seek trade support of the consumer advertising and promotion campaigns. Public relations activities were designed to complement the advertising campaign by providing information about American long grain rice to the opinion-forming press, magazines, and newspapers. Information included recipes as well as reproducible photographs in both color and black and white.

This research study was initiated to appraise the effectiveness of the promotion program, and to develop supplementary basic information which could be utilized in designing more effective promotional and market development strategies. Specific objectives included (1) evaluating the effect of the promotional campaign on consumer purchases of American long grain rice, (2) identifying segments of the population reached by consumer advertising and relative responses of each, and (3) determining consumers' awareness and recall of advertising messages. The findings relating to these objectives will add to the body of knowledge concerning generic advertising and promotion campaigns, and contribute to establishment of principles applicable to all agricultural products.

Data for the study were obtained under contract with two French private research firms, Secodip and Cofremca. Secodip maintains a continuous panel of French households who report weekly purchases of a number of specified items. Cofremca conducts omnibus consumer surveys periodically throughout the year in which specific questions for a number of clients are included in each interview.

Data on purchases provided by Secodip were obtained to analyze sales response to promotion, and to determine segments of population responding to promotion and the outlets patronized. The data obtained from Cofremca provide a basis for determining the awareness and recall of the advertising messages.

This report covers the period October 1966 through September 1970, and contains three sections. The first section covers the statistical analysis of monthly data to appraise the impact of the promotion on purchases of American long grain rice. The second section covers tabular analysis of the demographic characteristics of French households purchasing rice, instant potatoes, and pasta, to identify families who responded to the promotion. The third section covers the analysis of recall and recognition of the rice advertisements.

Kinds of Data Used

Analyses of purchases are based on household purchase data collected weekly (summarized by 4-week periods and quarters) from a continuous panel of 4,560 French households by Secodip. Disproportionate stratified random sampling procedures are used in selecting and maintaining households in the panel. Thus, panel data can be expanded to estimate the volume of rice purchased for home consumption within the various strata, as well as for the entire population of France. Despite the care exercised in selecting sample households for the panel, sample data and estimates are apt to be biased, since the panel consists only of families who are willing to keep records of purchases. 1/ Biases arise because purchase and consumption patterns of such families may be different from those of other families. Thus, estimates derived from panel data may be greater or less than for the universe represented. However, experience has shown that these biases (over- or under-estimates) tend to be constant between reporting periods. Therefore, for measuring changes in consumption, panel data are reliable and estimates of changes are valid.

Total purchases of all rice or a particular type of rice are a function of the number of buyers and the amount purchased per buyer. Since the population of France increased during the period of the study, consumption of rice would have increased even with a stable per capita consumption.

In this respect, the objectives of an advertising and sales promotion campaign may be either to induce current buyers to buy more of the product, or to gain new buyers, or both. If either of these objectives were attained, any change would be reflected in per capita or per household purchases. Thus, statistical analyses were made on volume of rice purchases per 100 households, per 4-week reporting period and per quarter. 2/

Each household in the panel keeps a diary or record of weekly purchases of a number of specified products and mails the completed diaries to the home office of Secodip. Data are tabulated and summarized by 4-week periods and by quarters to facilitate comparisons. The 4-week summaries represent total purchases made in France and in eight geographic regions. The 4-week reporting periods roughly correspond to months of the year with an extra period centered at the end of June and the beginning of July each year.

The quarterly summaries show purchases by French households classified by regions, size of community, family income, size of family, number of children in

household, occupation of head of household, age of housewife, work status of housewife, and type of outlet in which purchases were made.

Data on purchases of rice--total (all types), normal (milled rice), transformed (all precooked), parboiled, identifiable brands of American firms, and other selected brands of parboiled rice--were obtained covering reporting periods beginning in October 1966. Data on purchases of pasta (noodles, macaroni, spaghetti, etc.) and instant potatoes were obtained for corresponding periods beginning in October 1967. It was assumed that pasta and instant potatoes compete with rice for the French housewife's favor in meal planning.

The samples for the omnibus surveys conducted by Cofremca were representative quota samples of approximately 1,000 housewives each. The samples were stratified according to regions, degree of urbanization, age of housewife, and socioprofessional category of the head of the household. Since appropriate random sampling procedures were employed in selecting respondents in each demographic classification, sample data (percentages and averages) are representative of the various population classifications as well as the total population of French households.

Limitations of Household Purchase Data

Because a large proportion of American long grain rice loses its identity in marketing, it is impossible to directly associate net tonnage sales of American long grain rice with the promotional campaign. However, any significant changes in total rice purchases and purchases of identifiable American brands can be associated with the campaign. In this respect, it is logical that the promotional campaign for American rice would have a greater sales impact on identifiable American brands than on other brands.

In addition to these limitations of the data, student riots and national strikes which occurred during the spring and summer of 1968 seemed to affect purchases of rice, pasta, and potatoes during March, May, and June. 3/

Normal purchase data for these months were estimated on the basis of seasonal trends and year-to-year changes. Purchase rates were considerably greater than normal for these months, and the observed data for the months in question were used in calculating the seasonal and annual trends. Therefore, the adjusted data tend to overestimate normal purchases for each period for which estimates were calculated and to reduce the magnitude of any sales increases attributable to the promotion. However, as only three 4-week periods out of 26 periods were affected during the prepromotion time, it was not felt that results would be seriously affected.

ANALYSIS OF MONTHLY PURCHASES PER 100 HOUSEHOLDS

The statistical analyses in this section are based on monthly purchases, per 100 households, of rice by type from October 1966 through September 1970, and monthly purchases, per 100 households, of pasta and instant potatoes from October 1967 through September 1970.

The analysis of variance statistical procedure was utilized to determine (1) whether sales varied significantly between 4-week periods within each year; that is,

3/ Strikes and riots disrupted transportation and normal distribution of foods to retail outlets, thus it is assumed that consumers tended to stock-pile staple storable products such as rice.

whether consumption varied between seasons; and (2) more importantly from the standpoint of the American Rice Council and the Foreign Agricultural Service, whether there were significant changes in rice purchases between prepromotion and promotion years.

Total Rice Purchases

Because of increasing population, estimated total rice purchases for household consumption increased 316 metric tons from 1966/67 to 1967/68, although the average amount purchased per reporting period per 100 households was the same for both years (table 1). ^{4/} For 1968/69 (the first year of the promotion), total household purchases increased by another 3,541 metric tons. ^{5/} In that year, purchases per 100 households increased at a rate that was greater than could be expected from chance variation (fig. 1). Thus, it appears that the promotion program had a positive influence on sales during its first 12 months.

In 1969/70, the second year of the program, total volume of all types of rice purchased for household consumption was slightly less than in the first year (fig. 1). However, this apparent decline in total purchases could have resulted from sampling error. Purchases per 100 households also declined, but the decline was not statistically significant. That is, changes of this magnitude in year-to-year consumption patterns could be attributed to chance variation in data, or to sampling errors.

Table 1--Total rice (all types) purchased by French households for home consumption, 1966/67 - 1970/71 ^{1/}

Quarter ^{1/}	1966/67	1967/68	1968/69	1969/70	1970/71
	<u>Metric tons</u>				
October-December	15,867	15,680	16,100	16,240	17,200
January-March	16,953	16,520	17,730	16,730	--
April-June	15,636	^{2/} 15,229	15,960	15,545	--
July-September	15,782	17,245	18,425	18,661	--
Total	64,238	64,674	68,215	67,176	--
	<u>Kilograms</u>				
Per 100 households:					
Annual	439.6	439.2	457.3	447.0	--
Per 4-week period ..	33.8	33.8	35.2	34.9	--

^{1/} July-September quarter contains 4 reporting periods of 4 weeks each, other quarters contain 3 reporting periods. Data summarized from monthly totals.

^{2/} Data adjusted for April-June quarters due to strikes and riots.

^{4/} For this study, the marketing season is defined as beginning in October and ending in September of the following year to coincide with the start of the promotion campaigns each year.

^{5/} Annual total purchases are from monthly summaries, and vary from corresponding expansion of quarterly summaries because of discrepancies and rounding error in purchases per 100 households.

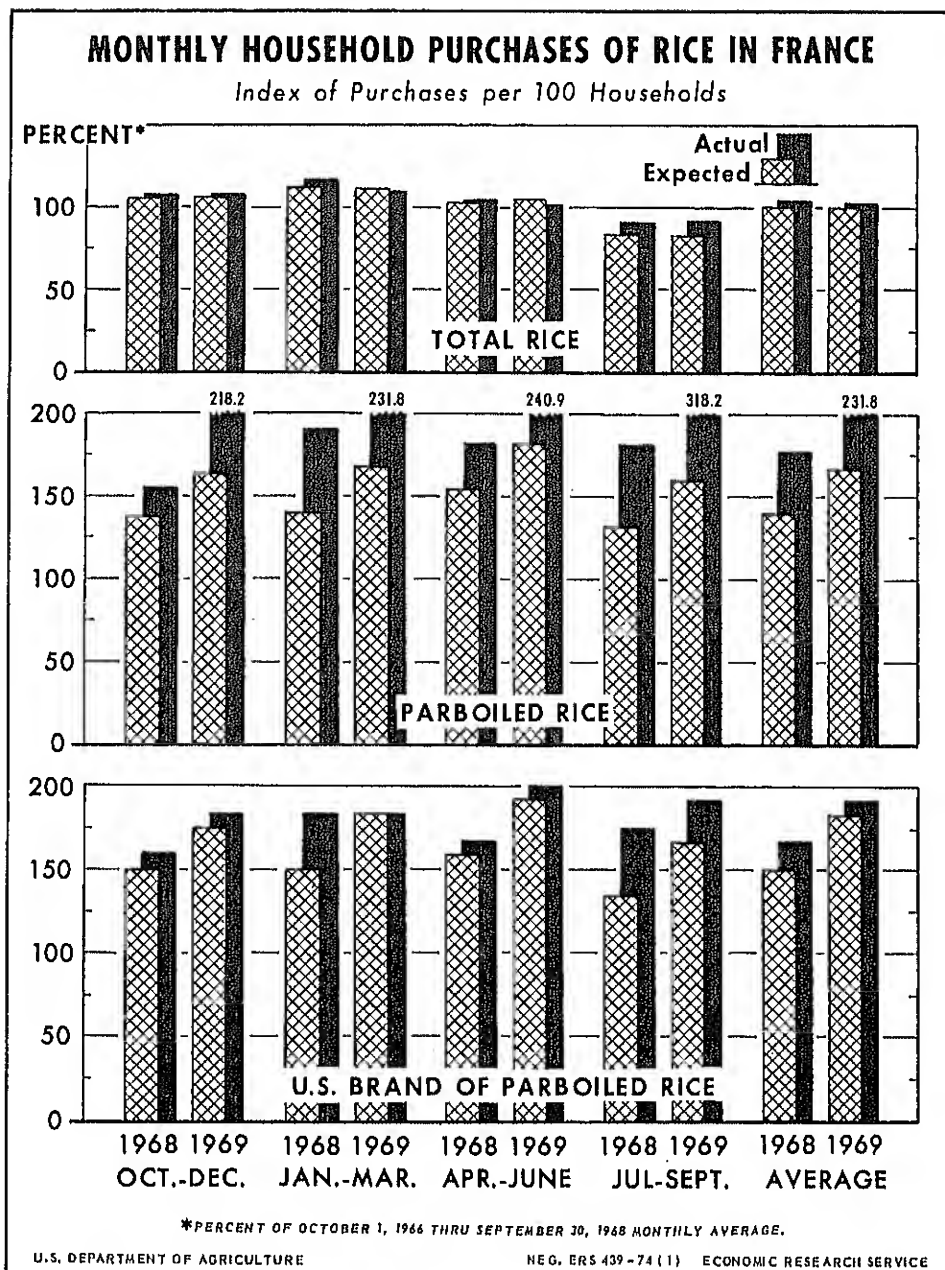


Figure 1

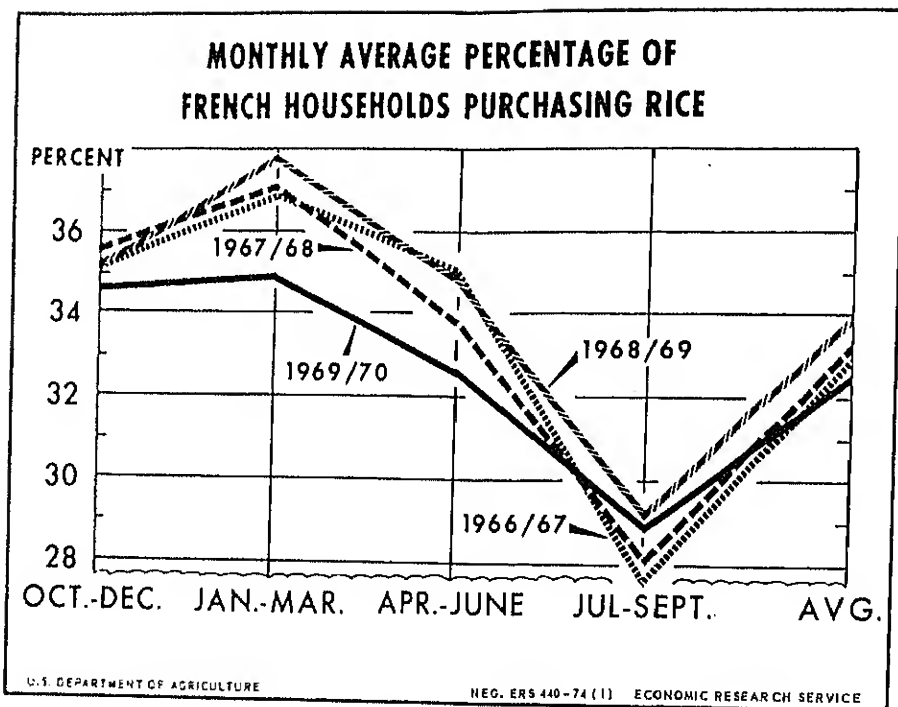


Figure 2.

Changes in percentages of households purchasing rice are shown in figure 2. The percentage of families purchasing rice during each 4-week period was about the same for the 2 years prior to promotion--33.3 percent--and was 0.6 percent higher for the first year of the promotion. In contrast, the percentage of households purchasing rice (all types) per reporting period during 1969/70 varied from 0.8 percent above to 2.2 percent below corresponding quarters of previous years, for an average decrease of 1.6 percentage points per month.

Normal Rice

Purchases of normal rice (all normally milled long, medium, and short grain rice) are shown in table 2. In the year prior to the program (1967/68), purchases per 100 households showed a net decrease of 9.6 kilograms or an average of 0.7 kilogram per 4-week reporting period. Even though this decline equaled increases in purchases of parboiled and other precooked rice, the decrease was not of sufficient magnitude to be statistically significant. However, during the first year of promotion, purchases per 100 household were approximately the same as in the preceding year--397.9 kilograms. Tabulations per 100 households for normal rice are not available for October 1969 through June 1970, but estimates of total quantities purchased (total of all types minus parboiled and other processed rice) indicate a significant decline in per capita purchases. In fact, the slight decline in purchases of all types of rice (table 1) can be accounted for by the decrease in purchases of normal rice.

These declines in per capita purchases were generally offset by increases in population, so that estimated total purchases of normal rice remained approximately stable from October 1966 through September 1969 (table 2), with an apparent decline after October 1969.

Table 2--Normal or unprocessed rice purchased by French households
for home consumption, 1966/67 to 1968/69

Quarter 1/	1966/67	1967/68	Average	1968/69
Metric tons				
October-December	14,879	14,259	14,569	14,249
January-March	15,782	15,060	15,421	15,534
April-June	14,348	2/ 13,777	14,062	13,817
July-September	14,538	15,488	15,013	15,674
Total	59,547	58,584	59,065	59,274
Kilograms				
Per 100 households:				
Annual	407.5	397.9	402.7	396.7
Per 4-week period	31.3	30.6	31.0	30.5

1/ July-September quarter contains 4 reporting periods of 4 weeks each, other quarters contain 3 reporting periods.

2/ Data adjusted for April-June quarters due to strikes and riots.

Transformed Rice

Transformed rice includes parboiled rice and other processed rice, such as minute rice. Taken together, processed rice showed a constant and sustained growth in total purchases (table 3). Since most of the growth was accounted for by parboiled rice, separate analyses were made for parboiled and other processed rice.

Processed Rice Other Than Parboiled

Estimated total purchases of other processed rice are shown in table 4. Net increases in purchases were 249 tons and 103 tons respectively for 1967/68 and 1968/69 over each preceding year. Monthly purchases per 100 households grew at a rate which was significant but the growth during promotion years was no greater than could be expected from the normal trend. That is, promotion for American long grain rice did not materially affect the rate of growth. Per capita consumption declined slightly from 1968/69 to June 1970.

Parboiled Rice

Parboiled rice, a relatively new product, has gained rapid acceptance in France since its introduction. Estimated purchases of parboiled rice are given in table 5. Total purchases increased more rapidly than purchases per 100 households because of increases in population. Purchases per 100 households increased 32.6 percent between 1966/67 and 1967/68. The increase for the first year of promotion was 57.3 percent--a net increase of 24.7 percentage points over that for the previous year. The accelerated purchase rate for parboiled rice continued during 1969/70, the second year of the program, but the growth over the first year was somewhat lower.

The acceleration in purchase rates for both 1968/69 and 1969/70 was significantly greater than expected from prepromotion trends (fig. 1). Moreover, statistical tests

Table 3--Transformed (parboiled and other processed) rice purchased by French households for home consumption, 1966/67 to 1969/70

Quarter 1/	1966/67	1967/68	1968/69	1969/70
	<u>Metric tons</u>			
October-December	995	1,431	1,851	2,410
January-March	1,171	1,490	2,295	2/ 2,739
April-June	1,288	3/ 1,452	2,148	2/ 2,739
July-September	1,244	1,751	2,751	2/ 3,593
Total	4,698	6,130	9,045	2/11,481
	<u>Kilograms</u>			
Per 100 households:				
Annual	32.1	41.5	60.7	--
Per 4-week period	2.5	3.2	4.7	--

1/ July-September quarter contains 4 reporting periods of 4 weeks each, other quarters contain 3 reporting periods.

2/ Data computed by reconciling differences in methods of reporting.

3/ Data adjusted for April-June quarters due to strikes and riots.

Table 4--Processed rice (other than parboiled) purchased by French households for home consumption, 1966/67 to 1969/70

Quarter 1/	1966/67	1967/68	1968/69	1969/70
	<u>Metric tons</u>			
October-December	292	333	361	269
January-March	293	400	423	2/ 437
April-June	292	3/ 286	351	2/ 347
July-September	278	385	372	2/ 358
Total	1,155	1,404	1,507	2/1,411
	<u>Kilograms</u>			
Per 100 households:				
Annual	7.9	9.4	10.2	--
Per 4-week period6	.7	.8	--

1/ July-September quarter contains 4 reporting periods of 4 weeks each, other quarters contain 3 reporting periods.

2/ Data computed by reconciling differences in methods of reporting.

3/ Data adjusted for April-June quarters due to strikes and riots.

showed that the increase in purchases was greater than could be expected from chance. Thus, it appears that the advertising campaign for American long grain rice accelerated the acceptance of parboiled rice, even though the price per kilogram was about 40 percent greater than the price of normal long grain rice in 1970. Data on percentage of households buying parboiled rice support this conclusion, as the percentage of buying households increased about 50 percent during 1968/69 compared with about 30 percent for 1967/68 (fig. 3).

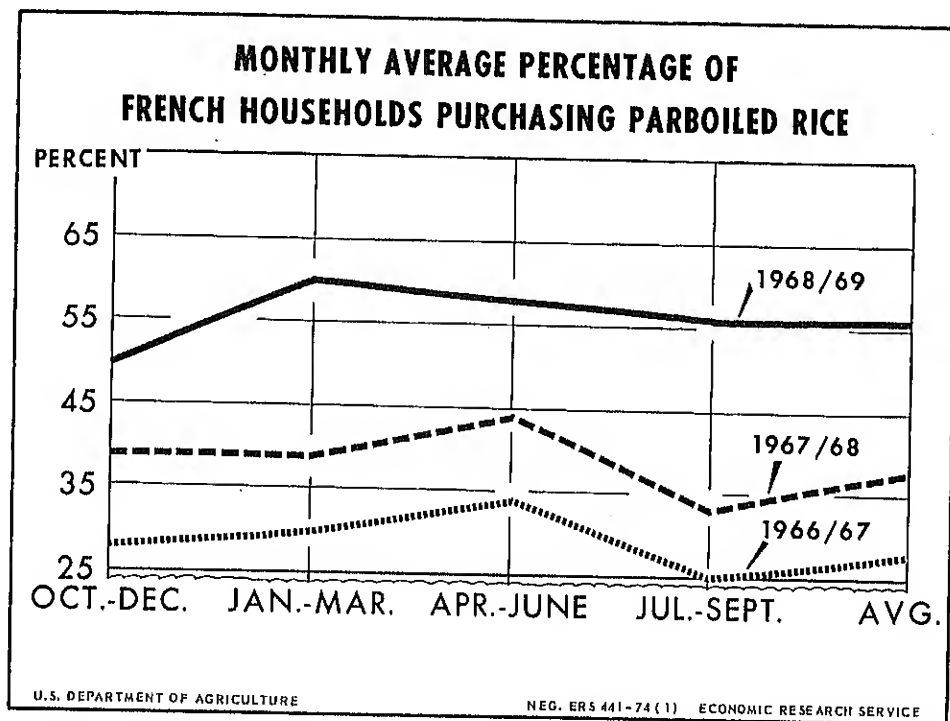


Figure 3

Table 5--Parboiled rice purchased by French households for home consumption, 1966/67 to 1970/71

Quarter <u>1/</u>	1966/67	1967/68	1968/69	1969/70	1970/71
<u>Metric tons</u>					
October-December:	703	1,098	1,490	2,172	2,919
January-March	878	1,090	1,872	<u>2/</u> 2,519	--
April-June	996	<u>3/</u> 1,166	1,797	<u>2/</u> 2,497	--
July-September	966	1,372	2,379	<u>2/</u> 3,216	--
Total <u>4/</u>	3,543	4,726	7,538	10,404	--
<u>Kilograms</u>					
Per 100 households:					
Annual	24.2	32.1	50.5	68.9	--
Per 4-week period ..	1.9	2.5	3.9	5.7	--

1/ July-September quarter contains 4 reporting periods of 4 weeks each, other quarters contain 3 reporting periods.

2/ Data computed by reconciling differences in methods of reporting.

3/ Data adjusted for April-June quarters due to strikes and riots.

4/ Total = sum of quarters.

Table 6--Identifiable American brands of parboiled rice purchased by French households for home consumption, 1966/67 to 1970/71

Quarters <u>1/</u>	1966/67	1967/68	1968/69	1969/70 <u>2/</u>	1970/71
<u>Metric tons</u>					
October-December:	410	585	827	993	1,610
January-March	440	602	987	978	--
April-June	468	<u>3/</u> 707	912	1,068	--
July-September	527	738	1,227	1,836	--
Total <u>4/</u>	1,845	2,632	3,953	4,875	--
<u>Percent</u>					
Percent of total parboiled rice purchases	52.1	55.7	52.4	48.6	--

1/ July-September quarter contains 4 reporting periods of 4 weeks each, other quarters contain 3 reporting periods.

2/ American parboiled rice packaged and distributed by French rice millers was identified on packages during 1969/70; these data only cover brands that were identifiable and reported separately prior to October 1969.

3/ Data adjusted for April-June quarters due to strikes and riots.

4/ Total = sum of quarters.

Identifiable American Brands of Parboiled Rice

It was assumed that the advertising campaign for American long grain rice, if effective, would have a greater influence on rice which could be most directly associated with the advertising, that is, identifiable American brands. Therefore, separate analyses were made for two American brands, the only identifiable American rice for which data were available before the fall of 1969. ^{6/} These two brands accounted for slightly more than 50 percent of parboiled rice sales each year from October 1966 through September 1969 (table 6). However, following the identification of other parboiled brands as long grain American rice and the rapid sales growth of the leading French brand, the share of the parboiled rice market of these two brands declined to approximately 49 percent--a net decrease of 4 to 7 percentage points in market share.

Purchases of the two American brands more than doubled between 1966/67 and 1968/69 with the greatest increase occurring between 1967/68 and 1968/69 (table 6). Even though the share of the parboiled rice market declined for these brands in 1969/70, total tonnage increased slightly. These data support the hypothesis that rice which could be identified as American rice would benefit most from the promotion program for American long grain rice. Statistical analysis of purchases per 100 households shows that sales gains after initiation of the promotion program were significantly greater than expected on the basis of prepromotion trends in purchase rates (fig. 1).

Pasta

Included in this category are such products as noodles, macaroni, spaghetti, and vermicelli. In total tonnage, pasta purchases by French households were about three times as great as total purchases of all types of rice. Total annual purchases remained relatively stable at approximately 221,500 metric tons for the period covered by the data. Annual purchases per 100 households declined from 1968/69 to 1969/70, but the decline was not statistically significant.

The popularity of these products is reflected by the relatively high percentage of households purchasing them each month. Except for July and August, the percentage of families purchasing pasta varied from 72 to 78 percent. The percentages for July and August were 57 and 61 percent respectively. The variation in percentage buying each month, and each year, between 1968/69 and 1969/70 was found to be statistically significant at the 0.01 probability level. While there was a decided decline in the percentage of families regularly buying pasta, it appears that the decline was offset by population growth.

Instant Potatoes

Household purchases of instant potatoes, like purchases of parboiled rice, have grown rapidly during recent years. Total annual purchases for household consumption, purchases per 100 households, and the percentage of families buying per month either doubled or more than doubled between 1967/68 and 1969/70.

^{6/} The American Rice Council arranged cooperative agreements with French rice millers and distributors to identify rice of American origin for the 1969/70 season. Data for these brands have been collected and tabulated since January 1970.

The dramatic growth in the market for instant potatoes between 1967/68 and 1969/70 can be accounted for by (1) the growth in percentage of families purchasing per month ^{7/} from 7.3 to 14.2 percent; and (2) the increase in amount purchased per month per 100 families--from 2.3 to 5.3 kilograms, or from 31.5 to 37.3 kilograms per 10 buying families. The rate of growth in percentage of families buying was relatively stable, but the amount purchased per 100 buying families grew faster than the percentage of families buying.

Estimated total annual purchases (in metric tons) of instant potatoes and parboiled rice were comparable from 1967/68 through 1969/70 (table 5). Moreover, the rates of growth in percentage of families buying the products were similar. However, about twice as many families bought instant potatoes as bought parboiled rice.

Statistical analysis of percentage of families purchasing instant potatoes and amount purchased per 100 households shows that the trends in growth rates of both series of data were highly significant. No doubt some of the rapid increase in consumption of instant potatoes has been at the expense of fresh potatoes. However, since instant potatoes are a convenience food, it is quite likely that any competitive appeal which rice and pasta may have enjoyed with respect to convenience has been diminished. Moreover, since convenience and time saving in meal preparation appear to be becoming more important in developed countries, the competition faced by the rice industry from instant potatoes and other convenience forms of potatoes, such as frozen french fries, is likely to become more intense.

DEMOGRAPHIC CHARACTERISTICS OF FRENCH HOUSEHOLDS PURCHASING RICE, INSTANT POTATOES, AND PASTA

Quarterly summaries of consumer purchase data for the various types of rice, tabulated by selected demographic characteristics of consumers, were obtained to determine characteristics of consumers who responded to the advertising campaign and types of retail outlets from which purchases were made.

Demographic characteristics included region, size of community, family income, size of family, presence of children, age of housewife, and type of outlet where purchased. Table 7 shows distribution of French households by the various demographic classifications for 1966/67 through 1969/70. The distribution of households was relatively stable within all demographic strata, generally varying less than 0.5 percentage point from year to year, except for size of community and family income. Households in rural areas and small villages (under 50,000) declined about 6 percent while those in large towns and the Paris metropolitan area increased the same amount. Upper income families increased 1.5 percent with a corresponding decrease in the upper middle income group, and the lower middle income families increased about 2 percent with a corresponding decline in lower income groups.

While these percentage changes are small, when applied to the 14 to 15 million families residing in France, the magnitude of changes in total number of families in each classification is significant. Moreover, the influence on total purchases of specific food products can be substantial. For example, as incomes increase in developed countries there is generally an increase in expenditures for food, especially higher quality foods and convenience foods. In addition, while consumption patterns developed over long periods of time tend to change slowly, consumers who move from one locality to another may not be able to find the preferred foods and must switch to foods that are available and adopt consumption patterns of the new locality.

^{7/} Percentages of families purchasing are tabulated each 4-week reporting period. Since some families may be in and out of the market during specific periods, the percentage buying during a year is probably higher.

Table 7--Distribution of French households by demographic characteristics,
1966/67 to 1969/70

Place of residence or family characteristics : 1966/67 : 1967/68 : 1968/69 : 1969/70				
Total households	14,612	14,722	14,915	15,028
Geographic region:				
	Percent			
North	10.4	10.7	10.3	10.4
East	10.0	9.8	9.5	9.5
West	18.3	18.2	17.9	13.0
Central east	13.7	13.8	14.1	14.0
Central west	8.3	8.1	8.2	8.2
Southeast	9.8	9.9	10.4	10.5
Southwest	8.8	8.7	8.8	9.0
Paris	20.7	20.8	20.8	20.4
Total	100.0	100.0	100.0	100.0
Size of community:				
Rural (under 2,000)	33.2	33.2	30.7	28.8
Small villages (2,000-50,000)	23.4	23.3	21.2	21.5
Large towns (50,000 & over)	27.0	27.0	29.9	31.3
Paris (metropolitan area)	16.4	16.5	18.2	18.4
Total	100.0	100.0	100.0	100.0
Family income:				
Upper	13.5	13.7	14.7	15.0
Upper medium	31.6	31.6	30.4	30.0
Lower medium	37.7	37.4	39.3	40.0
Lower	17.2	17.3	15.6	15.0
Total	100.0	100.0	100.0	100.0
Size of family:				
One person	14.3	14.3	13.7	14.5
Two persons	28.7	28.7	29.1	28.9
Three persons	19.9	19.9	20.3	20.0
Four or more persons	37.1	37.1	36.9	36.6
Total	100.0	100.0	100.0	100.0
Presence of children:				
One person				
Without children				
With children				
Total				
Age of housewife:				
Under 35				
35-49				
50-64				
65 and over				
Total				

During the second year of promotion, purchases for household consumption declined about 700 metric tons from the level attained during the first year, but were still significantly above the levels of prepromotion years.

These quarterly summaries showed the same seasonal patterns of household consumption and shifts in consumption from normal or unprocessed rice to parboiled rice as the analysis of monthly data covered in the previous section.

Total Rice, All Types

Total tonnage of rice consumed in France in each of the 2 years following the promotion was about 3,500 metric tons higher than before the campaign. ^{8/} Part of the increase can be attributed to an increase of about 500,000 (from 14.5 to 15.0 million) households between 1966 and 1970. However, the major part was due to increases of 9.5 percent in 1968/69 and 7.2 percent in 1969/70 in purchases per household over prepromotion years. Moreover, for the 2 years prior to initiation of the study, consumption of rice in France was relatively stable at about 4.2 kilograms per household (420 kilos per 100 households) per year. Thus, the shift of almost 10 percent in consumption per household during the first year of promotion further substantiates the conclusion drawn from statistical analysis of monthly data, that the promotion campaigns helped expand the total market for rice.

These increases in purchases per household were attributable to increased purchase rates by buying households, as the average percentage of households buying per quarter varied only from 59.0 to 60.5 percent among years from 1966/67 through 1969/70.

During the second year of promotion, purchases for household consumption declined about 700 metric tons from the level attained during the first year, but were still significantly above the levels of prepromotion years.

Regions, Size of Community, and Family Income. Changes in purchases and purchase rates in 1968/69 and 1969/70 by regions, size of community, and family income are shown in tables 8-10. Increases in total tonnage purchased occurred in all regions in the first promotion year, and in all but two regions in the second year. Consumers in urban areas accounted for all of the increases in rice purchases attributable to the promotional campaign. Among families classified by family income, the greatest increases in total rice purchases occurred in the lower middle income group.

Size of Family. As expected, total rice consumption by French households was greatest among larger families (four or more members per household); however, two-member households purchased a significantly greater total volume than three-member households (table 11). The latter is explained by the number of families in each classification as shown by the distribution of families in each group for the years under study. The percentage in each group varied less than 1 percent during the years covered by the data. However, this small variation in households had a significant influence on total amount purchased by each group, as a 1 percent change in the proportion of families in each classification amounted to about 150,000 households.

^{8/} Summaries of quarterly data for each marketing year show annual increases of approximately 7,000 metric tons in consumption for 1968/69 and 1969/70 over prepromotion years, but due to discrepancy in monthly and quarterly data for pre-promotion years, that estimate is not used in this report. It appeared that discrepancies were in quarterly summaries, and arose from two sources--rounding errors, and the fact that during prepromotion years each quarter only covered 12 weeks, or 48 weeks for the 12 months rather than 52. Therefore, the estimate of 3,500 metric tons is derived from summaries of monthly data.

Table 8--Total rice: Changes in tons purchased, percentage of households buy and purchases per 100 buying households, by regions, France, 1966/67-1967/68 average and change, 1968/69 and 1969/70

Region	Total purchases			Percent of households buying 1/			Purchases per 100 buying households 2/		
	Change			Net Change			Change		
	Base 3/	1968/69	1969/70	Base 3/	1968/69	1969/70	Base 3/	1968/69	1969/70
	Tons	Pct.	Pct.	Pct.	Pct.	Pct.	Kilos	Pct.	Pct.
North	5,394	15.9	18.0	55.0	2.0	3.4	624	14.1	12.3
East	7,195	9.4	-2.5	70.1	1.0	1.1	718	8.9	.7
West	7,628	8.2	-2.2	47.3	1.1	1.7	603	6.0	.2
East central	10,984	12.7	12.8	68.6	.6	2.9	794	7.4	4.2
West central	4,428	5.8	5.8	58.6	1.0	-1.6	630	2.1	5.4
Southeast	8,850	8.1	13.7	72.0	-3.2	-1.4	850	5.9	6.0
Southwest	4,560	21.1	28.3	55.7	6.7	2.7	637	5.2	17.0
Paris	12,440	10.8	11.1	57.6	.9	2.3	710	7.2	14.6
Total	61,479	11.1	10.1	59.5	1.0	-.1	705	7.2	7.5

1/ Average percentage of households buying each quarter during the year.

2/ Purchases per 100 buying households = $\frac{\text{Purchases per 100 households}}{\text{Percent of households buying}}$

3/ Base = 1966/67 and 1967/68 average.

Table 9--Total rice purchased, percentage of households buying, and purchases per 100 buying households, by size of community, France, 1966/67-1967/68 average and change, 1968/69 and 1969/70

Size of community	Total purchases			Percent of households buying 1/			Purchases per 100 buying households 2/		
	Change			Net Change			Change		
	Base 3/	1968/69	1969/70	Base 3/	1968/69	1969/70	Base 3/	1968/69	1969/70
	Tons	Pct.	Pct.	Pct.	Pct.	Pct.	Kilos	Pct.	Pct.
Rural									
(under 2,000).....	20,018	2.1	9.0	58.2	1.5	1.7	706	7.5	5.0
Small villages									
(2,000-50,000).....	13,864	7.6	10.6	55.4	6.2	7.0	692	10.8	9.8
Large towns									
(50,000 and over)...	18,068	16.9	22.4	63.0	-.1	-.5	724	3.9	2.5
Paris									
metropolitan area...	9,529	23.9	26.7	57.2	1.0	1.9	690	7.7	14.2
Total	61,479	11.1	10.1	59.5	1.0	.1	705	7.2	7.5

1/ Average percentage of families buying each quarter during year.

2/ Purchase per 100 buying households = $\frac{\text{Total quantity purchased (kilos)}}{\text{Total No. buying households}} \times 100$

3/ Base = 1966/67 and 1967/68 average.

Table 10--Total rice purchased, percentage of households buying, and purchases per 100 households, by income group, France, 1966/67-1967/68 average and change, 1968/69 and 1969/70

Family income	Total purchases			Percentage of households buying 1/			Purchases per 100 buying households 2/		
	Change			Net Change			Change		
	Base 3/ 1968/69:1969/70			Base 3/ 1968/69:1969/70			Base 3/ 1968/69:1969/70		
	Tons	Pct.	Pct.	Pct.	Pct.	Pct.	Kilos	Pct.	Pct.
Upper	11,435	10.4	8.1	67.8	.5	-2.0	844	.4	-1.2
Upper middle ...	19,366	9.2	9.3	60.0	2.9	1.8	684	8.5	11.1
Lower middle ...	22,686	18.6	20.2	59.2	1.1	.7	694	9.2	9.5
Lower	7,992	-1.9	-13.8	49.8	.1	-2.5	632	7.4	2.4
Total	61,479	11.1	10.1	59.5	1.0	-.1	705	7.2	7.5

1/ Average percentage of families buying per quarter.

2/ Purchases per 100 buying households = $\frac{\text{Total quantity bought (kilos)}}{\text{Total No. buyers}} \times 100$

3/ Base = 1966/67 and 1967/68 average.

Table 11--Total rice purchased by French households per year by size of family, 1966/67-1967/68 average, and percentage increases, 1968/69 and 1969/70

Family size	1966/67-1967/68 average	Increase over 1966/67-1967/68 average	
		1968/69	1969/70
	Metric tons	Percent	Percent
One person	4,000	10.9	28.1
Two members	13,900	7.4	5.9
Three members	11,100	11.6	12.0
Four or more members	32,500	12.5	8.8
Total	61,500	11.2	10.2

Thus, part of these changes for 1969/70 can be explained by revision of the estimated number of families in each classification, since total volume purchased was derived for each classification by multiplying kilograms purchased per household by the number of families in the classification. In 1970, the estimated number of one-person households was revised upward (increased) by approximately 150,000 over normal trend in growth over 1969; at the same time, other groups were revised downward an equal amount. 9/

For all family size classifications, slight increases (less than 1 percentage point) in the percentage of households buying rice and significant increases in kilograms purchased, per 100 buying families occurred in 1968/69. During 1969/70, the percentage of French households buying was about 1 percentage point below 1968/69 for all groups except the three-member families, which showed an increase of 0.5 percentage point. Purchases per 100 buying families increased about 15 kilograms for the two- and four-member families, were the same for three-member families, and increased almost 50 kilograms for one-person households during 1969/70.

Presence of Children. Families of two or more members were classified according to whether they had children under 16 years of age. Rice purchases by these two classes are compared with purchases by one-person households in table 12. The estimate of number of families without children was reduced by approximately 95,000 in 1970, and the estimate of households with children under 16 years of age was decreased by approximately 35,000 compared with distribution of households in each classification in previous years. The revision in population estimates of French households affects the percentage change in total tons of rice purchased between the 1968/69 and 1969/70 marketing years as described in the previous section on size of families.

As shown in table 12, families with and without children registered significant increases in total tons of rice purchased during both years of the rice promotion program. Families with children had the greatest increase during the first year but they had a smaller increase during the second year than the one-person households.

During the first year of promotion, all family groupings showed slight increases in the percentage of families buying rice (from one-tenth to five-tenths of 1 percentage point). Also, there was an increase of 60 kilograms in the quantity purchased.

Age of Housewife. A primary objective of the promotion campaign was to increase consumption of rice among families in which the housewife was under 35 years of age. Households in this group comprised almost one-fourth (23 percent) of total French households but only purchased about one-fifth (21 percent) of the rice, as shown in table 7.

The increase in purchases for families in the under-35 and the 50-64 age classifications did not keep pace with the average of all families, whereas families in the 35-49 and 65-and-over classifications showed significant gains. In this respect, the media strategy directed toward younger housewives was not too successful.

9/ It is possible that the composition of households in France actually changed between 1969 and 1970 as indicated by the population estimates; however, on the basis of trends in estimates for each classification during the preceding 4 years, it is more likely that a major revision was made in population estimates for 1970. The estimates used in this study for marketing years corresponding to the beginning and ending of promotional campaigns are weighted by one-fourth of the first year's population and three-fourths of the second year's population for specific marketing years 1966/67 through 1969/70.

Table 12--Total rice purchased per year by single persons and by families with and without children, France, 1966/67-1967/68 average, and percentage increases, 1968/69 and 1969/70

Presence of children	1966/67-1967/68 average ^{1/}	Increase over	
		1966/67-1967/68 average	1968/69 : 1969/70
	<u>Metric tons</u>	<u>Percent</u>	<u>Percent</u>
One-person households	4,000	10.9	28.1
Families (two or more members) :			
Without children	22,900	9.0	8.0
With children	34,000	12.7	9.7
Total	61,500	11.2	10.2

^{1/} Rounded to nearest 100 tons.

Table 13--Total rice purchases, percentage of households buying, and purchases per 100 buying households, by age of housewife, France, 1966/67-1967/68 average and change, 1968/69 and 1969/70

Age of housewife	Total purchases			Percentage of households buying			Purchases per 100 buying households		
	Change			Net change			Change		
	Base ^{1/} :1968/69:1969/70:			Base ^{1/} :1968/69:1969/70:			Base ^{1/} :1968/69:1969/70:		
	<u>Tons</u>	<u>Pct.</u>	<u>Pct.</u>	<u>Pct.</u>	<u>Pct.</u>	<u>Pct.</u>	<u>Kilos</u>	<u>Pct.</u>	<u>Pct.</u>
Under 35	13,436	7.2	6.4	58.1	.6	.8	676	4.7	3.8
35-49	23,232	12.7	15.0	66.2	1.2	.8	816	10.2	9.3
50-64	17,017	6.5	1.3	58.6	1.0	-.8	660	10.3	10.3
65 and over	7,694	23.4	23.8	50.6	3.2	1.0	511	16.0	20.2
Total	61,479	11.1	10.1	59.1	1.4	.5	705	7.2	7.5

^{1/} Base = 1966/67 and 1967/68 average.

Older homemakers appeared to be more responsive to the promotional campaign, as reflected by the percentage of families buying and the amount bought per buying family (table 13). On the basis of percentage changes in total volume purchased, percentage of families buying, and amount bought per buying family, the 65-and-over age group was the most responsive to the campaign. However, due to the larger basis during prepromotion years, the magnitude of positive changes in response to the campaign was greater for families classified in the 35-49 age group.

Type of Outlet. There are four major retail outlets for rice in France-- independent grocers, multiples (chains), cooperatives, and department stores with food departments. These outlets were the source of over 90 percent of rice purchased for home consumption at the retail level (table 14). It is readily apparent that multiple (chain) outlets have experienced a significant growth in the share of the market and are becoming more important in the retail distribution of rice. In contrast, independent grocers and other minor outlets declined in market shares and relative importance.

Normal Rice

Normal milled rice, consisting of long, medium, and short or round grain rice, constitutes the greatest portion of rice consumed by French households. However, the share of the total rice market represented by normal rice declined about 10 percentage points from 1966/67 to 1969/70. As shown in table 15, this decline in market share was accompanied by a corresponding increase in the market share of parboiled rice. The market share of other transformed or further processed rice remained stable.

Table 15--Annual share of rice market for normal and further processed rice, France, 1966/67-1969/70

Type of rice	1966/67	1967/68	1968/69	1969/70
	<u>Percent</u>			
Normal	92.3	90.3	86.8	82.6
Parboiled	5.8	9.4	11.0	15.3
Other processed	1.9	2.3	2.2	2.1
Total all rice	100.0	100.0	100.0	100.0

Despite the decline in the share of the market, total volume of normal rice purchased for household consumption increased approximately 3,000 metric tons during the first year of promotion--from about 56,000 tons to 59,000 tons. There was a corresponding increase of 8 kilograms in annual purchases per 100 households.

Since normal rice makes up such a great portion of the total rice market, demographic characteristics of heavy and light buying households were similar to those for total rice. In addition, demographic characteristics of households that made substantial shifts in purchase patterns and purchase rates were similar to those found for parboiled rice, but shifts in purchase rates were in opposite directions during 1969/70.

Table 16--Parboiled rice: Total purchases, percentage of households buying, and purchases per 100 households, by geographic regions and family characteristics, France, 1966/67-1967/68 average and change, 1968/69 and 1969/70

Regions and characteristics	Total purchases			Percent of households buying		Purchases per 100 buying households	
	Change			Net Change		Change	
	Base 1/	1968/69 2/	1969/70 3/	Base 1/	1969/70 3/	Base 1/	1969/70 3/
	Tons	Pct.	Pct.	Pct.	Pct.	Kilos	Pct.
Regions:							
North	432	80.6	157.9	6.6	10.2	412	3.4
East	552	113.0	188.4	10.2	6.4	373	80.2
West	231	90.9	196.1	2.6	3.9	338	14.8
East central	626	93.6	193.9	8.2	9.3	378	32.0
West central	321	62.9	57.9	7.0	3.9	378	.3
Southeast	348	117.5	289.9	6.2	10.1	386	36.0
Southwest	166	199.4	254.2	3.6	4.6	349	45.3
Paris	1,376	50.2	97.7	11.3	8.7	400	27.2
Total	4,054	85.9	156.6	7.2	7.7	386	19.7
Size of community:							
Rural	870	NA	74.6	4.8	3.2	374	17.1
Villages and small towns	883	NA	163.9	6.6	9.4	397	12.8
Large towns (50,000+)	1,172	NA	237.0	7.8	9.0	381	30.2
Paris (metro-politan area)	1,119	NA	125.1	11.7	9.4	399	8.0
Family income:							
Upper	900	NA	167.4	11.0	9.0	410	26.6
Upper middle	1,559	NA	108.3	8.1	8.1	413	7.0
Lower middle	1,262	NA	211.7	6.3	8.0	366	23.8
Lower	319	NA	150.8	4.2	3.7	294	52.4
Size of family:							
One member	231	NA	129.4	5.0	2.7	220	25.9
Two members	1,054	NA	124.8	7.1	6.5	350	14.9
Three members	818	NA	172.0	7.8	9.2	356	21.6
Four members	1,948	NA	168.1	7.6	9.6	474	16.0
Presence of children:							
One member	231	NA	129.4	5.0	2.7	220	25.9
Without children ...	1,662	NA	132.6	7.4	7.1	370	15.1
With children	2,158	NA	180.1	7.6	7.7	438	19.9
Age of housewife:							
Under 35	854	NA	227.8	6.8	11.0	360	24.2
35-49	1,662	NA	131.9	8.4	8.0	460	13.7
50-64	1,056	NA	145.5	7.0	8.3	350	28.0
65 and over	455	NA	151.0	5.6	4.7	276	31.2

Base = 1966/67 and 1967/68 average.

Total purchases by region tabulated from monthly summaries for 1968/69.

Data for 1968/69 not available.

Parboiled Rice

Sales of parboiled rice in France increased dramatically during the period under study--from 4,054 tons in 1966/67-1967/68 to 10,403 tons in 1969/70 (table 16).

Size of Community. Consumption of parboiled rice per household was highly correlated with the degree of urbanization and size of towns and cities. As shown in table 17, per capita consumption of parboiled rice was directly related to size of community. Thus, it is apparent that variation in purchases among regions was associated with the number of urban households in each region.

Table 17--Parboiled rice: Purchases per 100 households, by size of community, France, 1966/67-1967/68 average and 1969/70

Size of community	Quantity purchased per 100 households	
	1966/67-1967/68 average	1969/70
	Kilos	Kilos
Rural	17.9	35.1
Small towns (2,000-50,000)	26.2	71.9
Large towns (over 50,000)	29.6	84.0
Paris metropolitan area	46.3	91.0

Regions. On the basis of total tonnage, the Paris region is the leading consuming area of parboiled rice with purchases exceeding 2,700 metric tons in 1969/70 or about one-fourth of the total for France. Before initiation of the promotion campaign, purchases per household were significantly higher in this region than others (2 to 4 times) and accounted for one-third of total parboiled rice purchased in France. Although the share of purchases accounted for by this region declined during the 1969/70 marketing season, purchases were approximately double prepromotion years.

The eastern, east central, and southeastern regions showed the greatest rate of increase in purchases during the promotion period. Purchases for these regions were 3-1/2 to 4 times greater in 1969/70 than in prepromotion years and were approximately one-half to three-fourths the amount purchased in the Paris region. During the 1969/70 marketing season, annual purchases per 100 buying households in these regions exceeded purchase rates in the Paris region (table 16).

The 1969/70 purchase levels in the northern region were about two and one-half times greater than in prepromotion years. The west central region had the lowest increase in parboiled rice sales, only 58 percent compared to 100 to 290 percent for other regions. All of the sales increase in the west central region was derived from an increase in the portion of families buying. Purchase increases in other regions were derived from increases in both percentage of families buying and amount bought per buying family (table 16).

Size of Family and Presence of Children. Purchase data for household composition reveal the same generally favorable response to the generic promotion campaign as for other demographic classifications. Total parboiled rice purchased per household and

the increase in purchases during promotion years appeared to be a function of the number of persons in the household and the age of household members. One-, two-, and three-member households and households without children purchased approximately 100 grams per household member annually during the 1966/67 marketing season and 250 grams per household member annually during the 1969/70 marketing season. Households with four or more members and households with children purchased approximately 32 kilograms per 100 households in 1966/67 (approximately 140 grams per household member).

Family Income. Gains in purchases were recorded for all income classifications during promotion years; however, the percentage increase for families in the upper middle income group was less than for other groups, largely because of greater volume purchased during base years and a smaller increase in the amount purchased per buying family (table 16). The lower middle income families showed the greatest increase in purchases, about 212 percent, resulting from the doubling of the percentage of families buying as well as a 24 percent increase in amount bought per buying family. Part of the increase in total volume purchased was attributable to an increase of approximately 2 percent in the number of families in this classification (discussed in a previous section of this report; see p. 12).

Type of Outlet. Total volume of parboiled rice sold for household consumption increased significantly for all types of outlets. However, the relative importance of each in the distribution of parboiled rice shifted considerably since the promotion of American rice started (table 18). Multiple (chain) outlets and cooperatives gained in market share. The market share remained stable for department stores; independents lost approximately 8 percentage points in market share for parboiled rice. It is not known whether these shifts in shares of total parboiled rice sales resulted from changes in store numbers in each classification, shifts in consumer patronage, or differences in merchandising policies of stores in each classification.

Table 18--Distribution of parboiled rice sales by type of retail outlet, France, 1966/67, 1967/68, and 1969/70

Type of outlet	:	1966/67	:	1967/68	:	1969/70
	:	<u>Percent</u>		<u>Percent</u>		<u>Percent</u>
Independent grocery	:	42.6		40.7		32.9
Multiples (chains)	:	23.4		23.0		34.4
Cooperatives	:	4.5		4.6		7.1
Department stores	:	24.6		23.3		21.3
Others	:	4.9		8.4		4.2

American Brands of Parboiled Rice

Parboiled rice was introduced to the French market by an American firm a number of years before the generic promotion campaigns by the American Rice Council. It is reasonable to assume that French households would associate publicity and advertising accompanying the introduction with American long grain rice and transfer this association to the generic campaign. Evidence of this association was found in a consumer survey (discussed on p. 37) concerning the recall and recognition of the advertising

campaign. In addition, since parboiled rice can be easily differentiated by brand advertisers from normally processed rice, it is reasonable to assume that brand advertisers have given considerable support to parboiled rice in attempts to gain a greater share of an expanding market. Thus the rapid growth in the market for parboiled rice relative to other rice is not surprising.

Before 1969/70, only two brands of rice could be identified as American long grain rice. These brands accounted for 50 to 55 percent of the parboiled rice market from 1966/67 through the 1968/69 marketing season. Prior to the promotion campaign of 1969/70, a number of French rice millers executed cooperative agreements with the Rice Council of America and identified packages containing American rice with the Council's trademark. Thus French households were able to identify purchases of American parboiled and some other types of American long grain rice. During 1969/70, about 60 percent of total parboiled rice purchases were of identifiable American rice.

It was hypothesized that the advertising and promotion for American long grain rice would have the greatest impact on purchase rates of rice that could be clearly identified as American rice. Data for two American brands were available from the panel of households and were included in the analysis. These two brands were the only rice that could be identified as American rice by consumers prior to the promotion and the first year of the campaign, and for which data were available. During the second year's promotion, a number of French rice millers identified their packages containing rice of American origin, a high portion of which was parboiled, and data on these brands were secured for the 1970 calendar year. The findings presented in this section, however, pertain only to the two American brands.

From 1966/67 through 1968/69, these two brands accounted for over 50 percent of parboiled rice purchased for household consumption. During 1969/70, after French rice millers identified their brands as American long grain rice, the share of the parboiled rice market for these two brands fell to 45 percent. Despite the significant decline in the market share, total tonnage sales for the two brands increased about 500 metric tons in 1969/70. This simply means that sales of other parboiled rice increased at a faster rate than the two American brands. Part of the difference in rate of sales increase can be explained by the price differential between the two American brands and other brands of parboiled rice. The average price for American brands, weighted by tonnage purchased per month for calendar year 1970, was 4.26 francs per kilogram compared with 3.57 francs per kilogram for French brands identified as American rice. The average price of the leading French brand of parboiled rice of non-American origin was approximately 3.90 francs per kilogram in 1970.

The dramatic increases in sales resulted from an increase in the portion of households buying, from approximately 7.0 percent to approximately 15 percent per quarter in 1969/70, and an increase in the amount purchased annually per buying family--from approximately 3.9 kilograms in 1966/67 and 1967/68 to 4.6 kilograms in 1969/70. That is, on the average, approximately 1,056,000 French households purchased American brands of parboiled rice each quarter during 1966/67 and 1967/68 and purchased 3.9 kilograms per family during the year as compared to an average of 2,239,000 families buying per quarter in 1969/70 who purchased 4.6 kilos per family during the year.

The average annual consumption per household in 1969/70 was almost three times as great as 1966/67--increasing from 25 to 70 kilograms per 100 households. The rate of growth in total purchases, percentage of families buying, and purchases per 100 households doubled or more than doubled among households in each of the various demographic classifications (table 19). Each classification is discussed separately to pinpoint characteristics of households with above-average consumption and households showing the greatest rate of growth in consumption.

Table 19--American brands of parboiled rice: Total purchases, percentage of families buying, and purchases per 100 buying families, by demographic characteristics, France, 1966/67-1967/68 average and change, 1968/69 and 1969/70

Regions and characteristics	Total purchases			Percent of families buying			Purchases per 100 buying families		
	Change			Net Change 2/			Change 3/		
	Base 1/	1968/69	1969/70	Base 1/	1968/69	1969/70	Base 1/	1968/69	1969/70
	Tons	Pct.	Pct.	Pct.	Pct.	Pct.	Kilos	Pct.	Pct.
France	2,164	84.4	114.2	3.9	2.9	3.6	381	3.4	4.5
Regions:									
North	244	75.0	131.6	3.2	3.5	4.2	410	1.0	2.4
East	110	197.3	215.4	2.3	3.1	3.2	323	30.7	35.0
West	118	58.5	162.7	1.2	1.4	2.1	377	-27.1	-17.5
East Central	316	57.0	64.9	3.8	2.1	2.7	408	-2.7	-10.0
West Central	156	62.2	50.6	3.7	1.2	1.5	352	11.4	N.C
Southeast	192	195.3	375.0	3.8	4.5	7.2	330	33.3	51.2
Southwest	110	218.2	230.0	2.2	4.1	4.1	377	11.1	13.3
Paris	919	50.5	50.5	8.0	3.6	4.2	438	-12.1	-12.6
Community:									
Rural	378	69.0	82.5	2.2	1.6	1.5	348	7.5	13.8
Villages and small towns	448	77.2	108.5	3.0	3.2	3.8	426	-7.3	-5.4
Large towns	586	123.9	207.0	3.9	3.2	4.4	380	8.2	11.3
Paris (metropolitan area)	749	69.2	66.8	8.8	3.2	4.0	378	1.9	-2.1
Income:									
Upper	538	74.9	121.9	7.0	3.4	4.3	384	7.3	14.8
Upper middle	846	56.1	69.1	4.4	2.9	3.8	415	-3.4	-7.5
Lower middle	665	128.7	166.9	3.3	3.2	3.7	370	7.3	7.8
Lower	99	125.2	136.4	3.9	2.9	3.6	381	3.4	4.5
Size of family:									
One	92	150.0	188.0	1.8	2.7	2.3	245	N.C	8.6
Two	630	80.2	110.7	4.4	2.6	3.8	364	9.6	8.2
Three	490	74.9	103.3	4.6	2.8	3.7	368	3.0	10.1
Four and over	954	87.1	112.1	3.9	3.2	4.0	456	-9	-1.5
Presence of children:									
One member only	92	150.0	188.0	1.8	2.7	2.3	245	N.C	8.6
Without children	978	76.4	110.6	4.4	2.6	3.8	364	9.6	8.2
With children	1,097	87.4	110.0	4.0	3.3	3.9	420	.5	2.1
Age of housewife:									
Under 35	468	86.5	165.0	3.8	3.3	4.6	364	-1.6	16.8
35-49	846	87.6	96.2	4.5	3.4	3.9	443	4.5	-4.3
50-64	589	80.1	96.6	3.8	2.5	3.0	356	14.6	9.8
65 and over	247	88.3	128.7	2.6	2.6	3.1	290	3.1	12.1

1/ Base = average 1966/67 and 1967/68.

2/ Net change in percentage of families buying (-) indicates decrease.

3/ Purchases per 100 buying families = $\frac{\text{Total purchases (kilos)}}{\text{No. buying families}} \times 100$

The increase in tonnage of the American brands purchased resulted from significant increases in the percentage of households buying rather than changes in the amount bought per buyer. It is apparent that the greatest percentage increase occurred during the first promotion year and was no doubt associated with the promotional efforts.

Increases in purchase rates among households in certain demographic classifications did not vary significantly from increases for all households. These classifications include family size and presence of children. However, larger families and families with children accounted for 50 percent of the market. In addition, there were only small changes in percentage distribution through various retail outlets. In contrast, significant changes in purchase rates occurred among households classified by region, size of community, income group, and age of household head (table 19).

Region. The Paris region continued to be the greatest area of consumption for the two American brands of parboiled rice, accounting for approximately 35 percent of total purchases in 1968/69 and 30 percent in 1969/70, compared with approximately 42 percent during prepromotion years. The percentage of households buying in this region increased about 3 percentage points (9.5 to 12.2 percent) compared with the national average of 8.6 percentage points (3.9 to 7.5 percent) since the promotion started, but the amount bought per 100 buying households was relatively stable at about 390 kilograms. Tons purchased increased from 1,047 in 1967/68 to 1,383 during the first promotion year and were the same the second year.

The southeastern region showed the greatest gain in total purchases during promotion years, increasing about 325 tons per year. The percentage of buying families increased from 3.8 to 10.0 percent and purchases per 100 buying families increased from 300 to 500 kilograms during the same period. This region accounted for about 20 percent of total purchases of the two brands in 1969/70--an increase of 14 percentage points from 1966/67.

The southwestern and eastern regions showed similar patterns of growth. The two regions had about the same rate of increase in sales; however, the southwest experienced the greater increase in portion of households buying, while the increase in amount bought per buying family was greater in the east.

The north and west had above-average increases in purchases of these brands. Sales increases in the north were evenly distributed over each promotion year and were derived from an increase in percentage of families buying and amount bought per family. In the west, purchase increases were associated with increases in percentage of families buying as the amount bought per buying family declined.

Increases in tons purchased and amount purchased per household occurred in the other regions (east central and west central) but at a slower rate than the national average. The east central region, which accounted for almost 17 percent of total tonnage purchased in 1966/67, only accounted for 11 percent in 1969/70. The percentage of total sales declined from 6.9 to 5.1 percent in the west central region between 1966/67 and 1969/70.

Size of Community. The greatest growth in sales of the two American brands of parboiled rice occurred in the larger cities (50,000 and over population) outside the Paris metropolitan area during the promotion years. Total tonnage sales in these cities were 1,800 tons during 1969/70, over three times the annual sales level during prepromotion years. The annual increase in sales was about 900 tons per year during the 2 years of promotion. Sales increases were due to a threefold increase in the percentage of families buying over the 4-year period (from 3 to 8 percent). During the same period, the annual purchase rate per 100 buying families increased from 367 to 423 kilograms.

Total tons purchased more than doubled in rural areas and small villages, and in smaller towns between 1966/67 and 1969/70. These communities had twofold increases in percentage of households buying which largely accounted for the increase in total tonnage bought. However, changes in the purchase rate per 100 buying households were quite different--an increase from about 3.2 to 4.0 kilograms for rural areas, and a decrease from 4.2 to 4.0 kilograms for small towns and cities.

Sales changes in the Paris metropolitan area, which accounted for about 90 percent of sales in the Paris region, were similar to the regional sales previously described.

Family Income. Lower middle income families showed the greatest response to the promotional campaigns. Families in this classification passed the upper middle income group of families as the leading purchasers of American brands of parboiled rice. The increase in total purchases by lower income families resulted from a doubling of the percentage of families buying and a modest increase in the amount purchased per buying family. Total purchases of both upper and lower income families approximately tripled during the promotional campaign. However, the percentage of families buying and the amount purchased per buying family among lower income households were significantly below prepromotion levels for the average of all households. In contrast, high income families became relatively more important as buyers of the two American brands. Families in this classification had the highest percentage of families buying and the largest amount purchased per buying family before the promotion campaign and had greater net increases in both categories than other classifications.

Decreases in the amount purchased per buying family among upper middle income families during promotion partially offset increases in the percentage of families buying, resulting in a lower increase in total purchases than for families in other classifications.

Age of Housewife. During the first promotion year, total purchases of families in each age classification showed a similar increase--that is, the increase in purchases over prepromotion years did not vary significantly from the national average. However, during the second promotion year, increases in purchase rates were significantly higher than averages for families in the youngest and oldest classification of housewives, while families in the 35-49 and 50-64 age group were below average. The greater increases in total purchases resulted from greater increases in amount purchased per buying family for both groups of families, and a greater increase in percentage of families buying in the under-35 age group.

Lustucru Brand of Parboiled Rice

Data for this brand of parboiled rice were included in the data provided by the firm which collects and tabulates data from the national panel of French households. It is the leading French brand of parboiled rice in total tons purchased annually. This rice is not of American origin, according to a representative of the American Rice Council's advertising agency. The data revealed that sales of this brand increased at a proportionately greater rate than sales of other brands as well as total sales of parboiled rice after initiation of the advertising campaign (table 20). Because of the substantial increase in the share of the parboiled rice market for this brand, separate analyses were made to identify demographic characteristics of consumers who were responsible for shifts in market share relative to rice of American origin.

Prior to the promotional campaign, purchases of this brand were about 700 tons annually and represented about 17.5 percent of total parboiled rice sales. Sales of this brand approximately doubled during each of the 2 promotion years and represented almost one-third of the parboiled rice purchased in 1969/70.

Table 20--Distribution of parboiled rice sales by brands, prepromotion and promotion years, France, 1966-70

Year	Total	Two American brands		Lustucru brand		Other 1/	
		Quantity	Market	Quantity	Market	Quantity	Market
		: share	: share	: share	: share	: share	: share
	Tons	Tons	Pct.	Tons	Pct.	Tons	Pct.
1966-68 Ave...:	4,054	2,164	53.4	713	17.6	1,177	29.0
1968-69:	7,355	3,990	54.2	1,647	22.4	1,718	23.4
1969-70:	10,403	4,635	44.6	3,061	29.4	2,707	26.0

1/ Primarily distributor brands and brands of French rice millers (not separately identified in tabulations). Most of these brands were identified with American Rice Council's trademark in 1969/70.

Sales increased significantly within all demographic classifications of French families; however, the rate of sales gains was uneven among regions and certain demographic classifications of households as well as sales through various retail outlets (table 21).

The data indicate that major sales gains resulted from more widespread retail distribution, and the pattern of sales gain in different regions indicates that the firm marketing this brand followed a systematic plan of concentrating marketing efforts in larger towns and cities. Sales approximately doubled in rural areas, increased three times in small towns, six times in large towns, and four times in the Paris metropolitan area. Regional sales increases indicate that major marketing efforts were made in Paris and in the eastern, western, east central, and southwestern regions during 1968/69 (the first year of promotion). Net sales increases in these regions ranged from 134 to 263 percent above prior years, and registered further increases during 1969/70 ranging from 188 to 710 percent above base years. In the northern, west central, and southeastern regions, sales were only about 12 to 40 percent above base year levels in 1968/69. However, during 1969/70 sales were almost 400 percent above base year levels in the north, and 115 percent in the southeast. The central western region was second among all regions in total tonnage purchased during the 1966/67 and 1967/68 marketing seasons, but only registered a 49-percent increase in 1969/70 over those base years.

Families in other demographic classifications showing greater than average purchase increases in 1968/69 and 1969/70 compared with 1966/67 and 1967/68 include upper income and lower middle income families, families with three or more members, families with children, and families with housewives under 35 or between 50 and 64 years of age.

It is also apparent from the distribution of purchases through various retail outlets that a large part of the sales increases of this brand resulted from an expansion of distribution through multiple (chain) retail outlets (table 22).

As shown in table 22, sales of the Lustucru brand approximately doubled in independent groceries and department stores from 1966/67 to 1969/70 while sales through chains increased about 10-fold during the same period. In contrast, sales of parboiled rice of the two American firms approximately doubled in each of the three outlets during

Table 21--Lustucru brand parboiled rice: Total purchases, percentage of families buying, and purchases per 100 buying families, by demographic characteristics, France, 1966/67-1967/68 average and change, 1968/69 and 1969/70

Regions and characteristics	Total purchases			Percent of families buying			Purchases per 100 buying families		
	Change			Net change 2/			Change 3/		
	Base 1/	1968/69	1969/70	Base 1/	1968/69	1969/70	Base 1/	1968/69	1969/70
	Tons	Pct.	Pct.	Pct.	Pct.	Pct.	Kilos	Pct.	Pct.
France	713	131.0	329.3	1.5	1.1	3.3	318	31.8	34.9
Regions:									
North	64	39.1	390.6	1.1	-.2	3.2	372	73.1	25.5
East	99	211.1	465.6	2.6	3.5	7.0	310	15.2	31.6
West	68	166.2	292.6	.6	.8	1.7	432	12.3	-.2
East central	122	263.1	709.8	2.2	1.0	6.3	276	101.1	100.0
West central	116	26.7	49.1	2.6	-.2	1.8	365	37.0	-12.9
Southeast	100	12.0	115.0	1.5	.1	1.7	439	2.5	-26.2
Southwest	35	134.3	188.6	1.2	.8	.8	226	37.2	63.7
Paris	110	159.1	302.7	1.1	1.4	2.9	325	13.2	10.8
Community:									
Rural	190	51.6	173.2	1.8	-.4	.9	244	84.4	82.0
Villages and small towns	210	89.0	233.3	2.0	1.2	3.6	300	31.3	28.3
Large towns	230	160.0	538.3	1.8	1.6	4.8	332	16.9	42.5
Paris (metro-politan area) ...	80	208.8	391.2	.8	1.6	3.3	592	-23.3	-15.0
Income:									
Upper	144	186.1	368.8	2.0	2.6	4.4	354	14.7	31.9
Upper middle	324	70.4	191.0	1.9	.8	3.2	371	21.8	10.2
Lower middle	158	214.6	703.2	.9	1.4	4.0	312	17.0	38.1
Lower	100	19.0	97.0	1.5	-.1	.6	262	42.0	59.9
Size of family:									
One	57	0	180.7	1.4	-.5	.9	190	63.7	66.8
Two	182	98.9	274.2	1.2	1.0	2.8	335	12.5	17.3
Three	118	138.1	476.3	1.6	1.0	3.9	262	36.2	56.9
Four	360	148.0	329.4	1.6	1.8	4.4	411	15.8	13.9
Presence of children:									
One member only..	57	0	180.7	1.4	-.5	.9	190	63.7	66.8
Without children..	301	87.4	253.5	1.4	1.0	2.9	342	9.6	16.1
With children ...	353	179.9	431.4	1.6	1.7	4.4	347	30.2	36.0
Age of housewife:									
Under 35	124	172.6	508.1	1.4	1.2	4.6	266	41.7	26.5
35-49	290	101.7	287.6	1.8	1.2	3.2	386	16.6	30.0
50-64	217	135.0	341.0	1.7	1.1	3.3	298	46.0	57.0
65 and over	62	154.9	325.8	1.0	.8	1.8	239	23.0	31.4

1/ Base = average 1966/67 and 1967/68.

2/ Net change in percentage of families buying (-) indicates decrease.

3/ Purchases per 100 buying families = $\frac{\text{Total purchases (kilos)}}{\text{No. buying families}} \times 100$

the same period. Increases in metric tons for the two American brands from 1966/67 to 1969/70 were from 525 to 1,413 for chains, 657 to 1,579 for independent grocers, and 526 to 1,206 for department stores.

The gain in market share of the parboiled rice market for the French firm was primarily from the relatively greater sales gains in retail chain outlets. Moreover, it is evident from an examination of these sales data that the French firm employed an aggressive sales program to obtain distribution and shelf space in chain outlets, since the American firms had established distribution through chain outlets in 1966/67, and American rice was further supported by the promotion campaign.

Table 22--Distribution of sales of Lustucru brand parboiled rice by type of retail outlet, France, 1966/67-1969/70 and first quarter 1970/71

Marketing : Period :	Total		Independent : grocers		Multiple : (chains)		Coopera- : tives		Dept. : stores		Others ^{1/}	
:	Tons	Pct.	Tons	Pct.	Tons	Pct.	Tons	Pct.	Tons	Pct.	Tons	Pct.
1966/67 ...	804	100	526	65.4	132	16.4	-	-	146	18.2	-	-
1967/68 ...	604	100	427	70.7	103	17.0	-	-	74	12.3	-	-
1968/69 ...	1,647	100	791	48.6	613	37.7	30	1.8	194	11.9	-	-
1969/70 ...	3,061	100	1,187	38.3	1,298	41.3	165	5.3	361	11.7	105	3.4
1970/71 ^{2/}	963	100	286	29.7	482	50.0	30	3.1	120	12.5	45	4.7

^{1/} Minor retail outlets not otherwise classified.

^{2/} Sales for October-December 1970 only.

Parboiled Rice Not Identified by Brand

Monthly purchase data during 1969/70 for minor brands of French rice millers' parboiled rice identified with the promotion campaign sponsored by the American Rice Council closely corresponded to data for unidentified brands for previous years. Thus, purchase data for such identified brands were included with unidentified brands. The data were not summarized by brands of American firms or Lustucru brand, or brands of distributors, chains, and buying organization. The latter brands were summarized separately in the basic data, but constituted such a small share of the parboiled rice market that they did not warrant separate analysis.

Multiples(chains) were the most important retail outlet for rice identified as American in 1969/70, with about 31 percent of the total. Department stores accounted for about 24 percent of sales, followed in importance by independent grocers (22 percent) and cooperatives (18 percent). Minor outlets accounted for the remaining 5 percent of total sales.

Instant Potatoes

The volume of instant potatoes purchased by French households was compared to volume of parboiled rice in both 1969 and 1970. On a calendar year basis, French households purchased 8,025 tons of parboiled rice and 7,710 tons of instant potatoes in 1969. In 1970, purchases of parboiled rice increased to 10,879 tons and sales of instant potatoes increased to 11,030 tons.

Like parboiled rice, instant potatoes are a relatively new product on the French market. They offer greater convenience in preparation and less waste than ordinary potatoes, but they do have the disadvantage of being less versatile in variety of uses than regular potatoes.

Demographic tabulations of data on household purchases were not available before January 1969 on a quarterly basis. However, data are available on a monthly basis for tonnage purchases from October 1967 through December 1970. These data show an annual rate of growth over immediately preceding years of 63 percent in 1968/69, 42 percent in 1969/70, and 39 percent for the first quarter of 1970/71. Comparable increases in purchases of parboiled rice for the same periods were 67, 44, and 29 percent respectively.

The seasonal patterns of purchases are partially obscured in the quarterly tabulations. This is due to the fact that the fourth quarter contains four 4-week periods, whereas other quarters only contain three 4-week periods. Moreover, for the 4-week period covering the end of June and the beginning of July, as well as the September period, sales are near seasonal peaks. As shown in figure 4, rates of purchase were significantly higher from March through June each year and were at seasonal lows during July and August. Purchase rates rebounded in September to near the peak month levels but then declined to near the seasonal lows in October and increased steadily through the other fall and winter months.

The low months of household consumption corresponded to traditional summer vacation months, and it is logical to conclude that the relatively high purchase rates for September could be associated with restocking of household supplies following summer vacations. The sharp decrease in purchase rates in the following month further suggests this hypothesis.

Months with high and low rates of consumption of instant potatoes corresponded to the purchase rates for rice, but in other months the consumption patterns varied.

The amount of instant potatoes purchased per household and the percentage of households buying varied considerably among regions and other demographic classifications. The greatest variation from the patterns of household purchases of parboiled rice was among regions and rural and urban communities. These classifications are discussed separately.

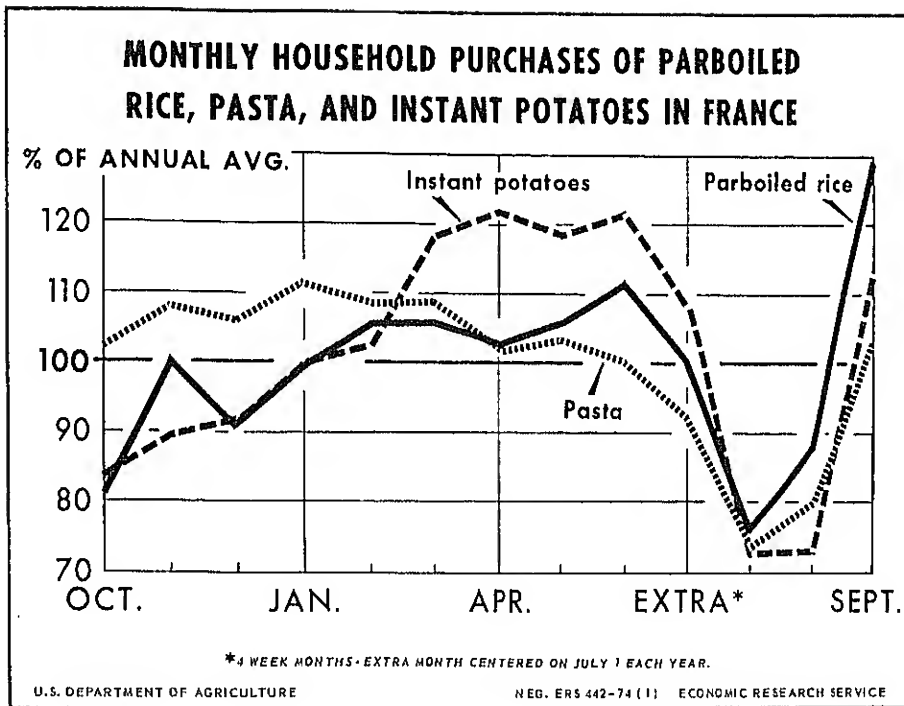


Figure 4

Region. Households in the Paris region purchased approximately one-fourth of the total volume of instant potatoes consumed in France. However, the amount bought per 100 households, 84 kilograms in 1969/70, was about 40 kilograms less than for households in the southeastern region and 14 kilograms less than the southwestern region. In addition, the percentage of households purchasing in Paris--30 percent--was 11 percentage points below the southeastern region and 1 percentage point below the southwestern region. The Paris, southeastern, and southwestern regions were the only regions with purchases per 100 households above the national average of 73.3 kilograms in 1970. The purchase rate in the western region was about 66 kilograms per 100 households, and 30 percent of the families bought the product. The east had the lowest purchase rate per 100 households (45 kilograms) and the lowest percentage buying (23 percent). Other regions purchased 50 to 58 kilograms per 100 households and 25 to 30 percent of families bought in 1970.

Compared with parboiled rice, kilograms of instant potatoes purchased per household were almost 3 times greater in the west, 2 times greater in the southeast and southwest, 20 percent greater in the west central region, slightly lower (3.5 percent) in the Paris region, 20 percent below in the north, 30 percent lower in the east central region, and 60 percent lower in the east.

Size of Community. The amount purchased was approximately two times greater than in the rural areas versus 42. The percentage of households buying was 30 percent in rural areas to about 30 percent in each of the urban areas.

Compared with parboiled rice, kilograms purchased per household were about 20 percent greater in rural areas and small towns and cities, about the same in cities over 50,000, and 7 percent less in metropolitan Paris.

Purchase patterns on the basis of percentage buying and purchases per 100 households for families classified by family income, size of family, presence of children, and age of housewife were similar to patterns for parboiled rice. That is, families in higher income classifications, large families, families with children, and families in which the housewife was under 50, purchased instant potatoes at significantly higher rates than other families. In addition, the percentage distribution of total sales through various retail outlets was practically the same as for parboiled rice.

Pasta

French consumers purchase three to four times more pasta than rice for household consumption. Annual purchases per 100 households declined during 1970 compared with 1969--from 1,495 to 1,475 kilograms. The decline was relatively consistent for each quarter of the year, and among households in the various demographic classifications. The variation in distribution of total purchases between years for each region, size of community, and other demographic classifications was less than 1 percentage point for any specific grouping of households. With such small shifts in purchases, it is only important to note regions and characteristics of households that were heavy buyers of pasta.

Based on purchases per 100 households, families residing in the southwest, southeast, and west central regions were above the national average and significantly above other regions in total consumption. The east and east central regions were about average in kilograms purchased annually, while the north and west were slightly below average. The Paris region had the lowest rates of consumption of any region, approximately 1,000 kilograms per 100 households annually compared with the national average of approximately 1,500 kilograms, and 2,200 kilograms for the southwest which has the highest rate of purchase of any region. Because of difference in population, the western region, with slightly below-average purchases per household, accounted for the greatest share of total tonnage purchased, approximately 18 percent compared with 13 to 14 percent each for the Paris, southwestern, southeastern, and east central regions, and about 9 percent each for the northern, eastern, and west central regions.

Households in rural areas and small villages (under 2,000 population) were decidedly heavier consumers of pasta than households in urban areas. These households purchased about 1,875 kilograms per 100 households annually and accounted for approximately 37 percent of the total tonnage purchased by all households. Households in small towns and cities (less than 50,000 population) purchased about 1,500 kilograms per 100 households annually and accounted for 22 percent of total volume purchased for household consumption. Families in larger cities (over 50,000 population) purchased about 1,400 kilograms annually, but because of the greater number of households they accounted for about 30 percent of the total sales. The annual purchase rate in metropolitan Paris was about 975 kilograms per 100 households (about half the rural rate) and accounted for about 12 percent of the total market. Except for the east central and southeastern regions, which had relatively high consumption rates of both rice and pasta, regions and communities with high purchases of pasta were low purchasers of rice and those with low rates of pasta purchases were high purchasers of rice.

A similar relationship was found for households classified by family income. The upper income families purchased relatively more rice than pasta compared with the lower

income families. Upper income families purchased about 18 percent of all rice bought for household consumption, but only 12 percent of the pasta, while the low income families bought approximately 10 percent of the rice and 13 percent of the pasta.

The distribution of shares of total rice purchases and pasta purchases was about the same in other demographic classifications, that is, larger families, families with children, and families with the housewife under 50 accounted for 60 to 80 percent of total purchases of each product.

There is no doubt that pasta competes with rice for position on the menus of French households. However, it must be remembered that most households use a number of products--for example, rice, potatoes, and pasta--that can be substituted one for another in the menu to obtain variety. The competition thus, is which will be used most frequently. In this respect, taste preference and consumption patterns developed over long periods of time tend to dominate decisions on relative frequency of uses of such substitute products.

RECOGNITION AND RECALL OF ADVERTISING

Surveys of a sample of French households were conducted in November 1969, May 1970, and February 1971 to appraise the extent of coverage of magazines used in the media campaign and the portion of households who saw and recalled the content of the advertising messages. Another objective of this phase of the research was to determine to what extent homemakers utilized the information in the advertising, which emphasized various uses (recipes) for American long grain rice. Each survey was a part of an omnibus survey of French housewives. ^{10/}

The initial survey, in November 1969, was originally scheduled to be conducted in August and early September, immediately before the start of the 1969/70 media campaign. This survey contained only four questions. One question covered magazines read regularly or occasionally, and the other three questions involved the recognition and recall of advertisements for rice during the preceding 3 months in which no advertising was conducted by the Rice Council. The initial survey was to develop benchmark data (a measure of general awareness of rice advertising and spurious responses) to compare changes in awareness of the rice advertising in later surveys which could be associated with the Rice Council's advertising campaign for American long grain rice. Due to unforeseen circumstances, the contract for executing the first survey was delayed and the first survey was conducted in November, a period of intense advertising activity by the American Rice Council. Thus the November survey results reflect reaction to the advertising campaigns as well as any general awareness and spurious responses inherent in survey data. The other two surveys contained the same four questions as the first, and six additional questions pertaining to the content of the advertising messages.

Magazine Readership

About three-fourths (78 percent) of French homemakers regularly or occasionally read one or more of the magazines used in the advertising campaigns. The percentage of respondents who read one or more magazines was consistent over the three surveys. The average number of magazines read per reader was 3.1 over the three surveys. Readership was highest in the Paris region, averaging 88 percent, and lowest in the

^{10/} The omnibus surveys conducted by private research firms contained questions from several clients, but were limited to a maximum number of questions and a maximum time for completing an interview.

western region, averaging 70 percent during the three survey periods. In the northern, eastern, southern, and southeastern regions, average readership was about the same as the national average. In general, readership was highest for the November 1969 survey and lowest for the February survey.

Magazine readership in the various regions was related to the degree of urbanization or the number of towns and cities in each region. Over the three surveys, readership of one or more magazines used in the campaign averaged 91 percent in metropolitan Paris, 81 percent in other towns and cities, and 68 percent in rural communities.

On the basis of socioprofessional classification of heads of households, the professionals, executives, and white collar classifications registered the highest average readership (91 to 93 percent), followed by craftsmen, small shopkeepers, and skilled workers (83 to 86 percent). Average readership for other workers was 76 percent, and lowest for heads of households not working and farmers--66 and 64 percent respectively.

The size of households was directly related to readership of magazines used in the campaigns--varying from 68 percent for one-member households to over 80 percent for four- and five-member households.

The data for readership by age of housewife show a significant inverse relationship between readership and age. The percentage of respondents reading one or more magazines was highest for the under-35 age group and declined through the oldest age group, as shown in the following distribution of readership by age groups:

Age of housewife	Percentage reading : one or more magazines	Magazines read : per reader
	<u>Percent</u>	<u>Number</u>
Under 35	87	3
35-49	82	3
50-64	76	3
65 and over	61	3.4
All ages	78	3.1

The relative popularity of the 12 magazines, as reflected by percentage of respondents reading, varied among age groups. "Femme d'Aujourd'hui" was the most frequently read by all age groups, and "Cuisine Magazine" and "La Bonne Cuisine" were the least frequently read (table 23).

The variation in percentage of respondents reading specific magazines among demographic classifications corresponded to variations in total readership in all classifications except age of homemaker. That is, the relative importance or ranking of individual magazine readership corresponded closely to total readership. Moreover, excluding the magazines with extremely high or low average readership, each magazine is read by one-third to one-half of all magazine readers for all classifications except age of housewife.

Recall of Rice Advertising

One-third of all respondents (42 percent of magazine readers) recalled seeing advertisements for rice; however, of respondents recalling advertisements, approximately one-third could not identify the magazines in which ads were seen and one-sixth indicated that advertisements were seen in other magazines.

In general, demographic classifications with high percentages of overall or specific magazine readership had higher percentages of respondents recalling advertisements. There also appeared to be some relationship between recall of rice advertising and changes in rice purchases per 100 households and percentage of households buying rice by demographic classification. Geographic areas, community sizes, age of housewife, and size of families with greatest readership and rates of recall showed the greatest positive changes in percentage of families purchasing and purchases per 100 households. This was especially apparent in the purchase data for parboiled rice.

Only six of the magazines included in the list of magazines furnished respondents during interviews produced significant scores on the recall of rice advertising. The average recall (over all respondents) for the three surveys for the six leading magazines varied from 2 to 7 percent of all respondents and when adjusted for all magazine readers only varied from 2.6 to 9.0 percent. The percentage of readers of specific magazines recalling advertisements for rice in the magazines read was relatively low. Among the six magazines with highest recall percentages, the percentage of readers of a specific magazine recalling the ads ranged from 6 to 16 percent. The six magazines were consistent in receiving the six highest recall scores in all demographic classifications. The six magazines in order of overall ranks were "Femme d'Aujourd'hui," "Mode de Paris," "Elle," "Jours de France," "Bonne Soiree," and "Marie France." "Femme d'Aujourd'hui" was either ranked first or tied for first over all demographic classifications and "Marie France" was generally ranked lowest, while the other four magazines varied in recall scores of respondents in various demographic classification (table 24).

"Femme Pratique" and "Selection," the only other magazines attracting a significant level of readership, were not named by a significant percentage of respondents except in the Paris, northern, and eastern regions, larger cities, and age groups under 50 years. Advertisements for rice in the other four magazines that received low readership scores were not even recalled by respondents in many of the demographic classifications.

Recall of Information in Rice Advertisements

In all three surveys, respondents recalling advertising for rice were asked to describe the advertising they had seen. As in the question concerning the identification of magazines, approximately 10 percent of all respondents, or one-third of those noticing the advertisements, could not describe the content of the advertisements. The remainder of those noticing advertisements for rice gave a variety of answers, all of which indicated they had actually seen and read advertisements for rice. Information remembered most frequently and relatively consistently over all demographic classifications, ranked in order of recall, was: (1) Doesn't stick, (2) recipe information, (3) specific brands, (4) general description of advertisements, and (5) long grain rice. Only 2 percent of respondents recalled advertisements referring to American rice. The same percentage recalled an advertisement for a specific brand of rice.

Table 23--Relative popularity of 12 magazines used in advertising campaigns for American long grain rice, France, 1968-70 1/

Magazine	Age of housewife					Percent of respondents reading magazine
	All	Under			65 and	
	ages	35	35-49	50-64	over	
	Rank					Percent
Femme d'Aujourd'hui ...	1	1	1	1	1	43
Jours de France	2	4	2	3	3	33
Elle	3	2	4	8	6	32
Mode de Paris	3	3	3	2	6	32
Marie France	5	5	4	5	3	31
Selection	6	7	4	6	5	28
Bonne Soiree	6	7	7	4	2	28
Femme Pratique	8	6	8	6	8	26
Arts Menagers	9	9	9	10	9	14
Jardin des Modes	9	9	10	9	10	14
La Bonne Cuisine	11	11	11	11	11	11
Cuisine	12	12	12	12	12	9

1/ Ranking based on average percentage of French homemakers reading each magazine. Rankings are not continuous because of ties in percentage reading.

Table 24--Six French magazines ranked on basis of percent of respondents recalling rice advertising, by region, age group, and size of community, France, November 1969, May 1970, and February 1971 1/

Magazine	Region						Total
	Paris	Paris	North		South-	South-	
	metro.	Paris	&	West	west	east	
	area	region	east	West	west	east	France
Femme d'Aujourd'hui...	1	1	1	1	1	1	1
Mode de Paris	1	2	2	2	1	6	2
Elle	1	3	2	3	6	1	3
Jours de France	4	5	2	3	3	3	3
Bonne Soiree	6	3	6	3	3	4	6
Marie France	6	6	5	3	6	6	6
	Age Group					Total	
	Under			65 and			
	35	30-49	50-64	over			
Femme d'Aujourd'hui...	1	1	1	1	1		
Mode de Paris	2	3	2	3	2		
Elle	3	2	3	3	3		
Jours de France	6	3	3	3	3		
Bonne Soiree	6	6	5	1	6		
Marie France	6	6	6	6	6		
	Size of Community					Total	
	Paris	100,000:	2,000-	Under			
	(city)	+	100,000:	2,000	Rural		
Femme d'Aujourd'hui...	1	1	1	1	1		
Mode de Paris	3	3	2	2	1		
Elle	1	2	2	5	1		
Jours de France	4	3	2	2	6		
Bonne Soiree	6	6	2	2	3		
Marie France	6	6	6	6	6		

1/ Based on percentage recalling advertisement for rice rounded to nearest percent; skips in ranking are made to compensate for ties.

When respondents recalling rice advertisements were asked if a specific type of rice was mentioned in the advertisements, almost two-thirds (63 percent) answered that long grain rice was mentioned. One-fourth answered USA or American to a similar question concerning the country of origin. These answers were relatively consistent over all demographic classifications of respondents. In addition, respondents who had noticed advertisements for long grain rice were asked if they could find long grain rice in the food stores they usually patronized. Approximately 80 percent said yes, 5 percent answered no, and the remainder did not answer. Again the distribution of answers was relatively consistent over all demographic classifications of respondents.

Use of Recipes in Advertisements

One of the objectives of the advertising and promotion campaign was to increase rice consumption through expansion of uses of rice in menus of French households--thus, recipes for a variety of rice dishes were emphasized in the advertising campaigns. As previously indicated, recipe information was the second most frequent unaided response given when describing advertisements for rice. All respondents noticing rice advertisements were asked during the second and third surveys if they had used any of the recipes in the advertisements. Eighteen percent of all respondents noticing rice advertisements had used one or more of the recipes. However, the percentage using the recipes varied significantly among the various demographic classifications of respondents. Moreover, the uses of recipe information did not appear to be consistently related to the percentage of respondents reading magazines or the percentage recalling advertisements for rice. For example, in the Paris area the percentage using the recipes was the lowest of any area--only 10 percent; yet this area was among the highest in percentage of respondents reading magazines and recalling advertisements for rice. In contrast, the north and east regions, which also had a high percentage of magazine readers and a high percentage of respondents recalling rice advertisements, had the highest percentage using the recipes. Thus it appears that the distribution of respondents utilizing recipe information among the various classifications is random and possibly depends on the extent of adventuresomeness and/or current cooking knowledge. The highest percentage of respondents using the recipe information was housewives over 35 years old residing in northern, eastern, and Paris regions, and cities of 100,000 or more inhabitants excluding the city of Paris. The recipes used most frequently were for cakes and other desserts, vegetable dishes, salads, and with meats. In all demographic classifications, one-half to two-thirds of respondents using the recipes used them as a result of seeing the advertisement. Twelve percent used a recipe because it was suggested by a parent or a friend and the remainder used it for other reasons.

Approximately 90 percent of respondents using the recipes made one or more favorable comments about the ones they had used. Moreover, about 85 percent indicated they would use the recipes once a month or more frequently.

RECOMMENDATIONS

Since much American long grain rice loses its identity in the French distribution and marketing system, alternative strategies of identifying and promoting American long grain rice should be explored to obtain maximum impact from the promotion. For example, cooperative promotional campaigns with rice millers could be conducted on a cost sharing basis, or advertising allowances might be offered to millers or processors who provide proof of advertising and identifying American long grain rice to consumers at point of purchase. An advantage of these approaches is that millers, processors, or brand distributors have a sales force to service wholesalers and retailers, and the sales force may be able to persuade retail outlets to aggressively merchandise their brands

and to capitalize on any brand preference that had been previously generated among consumers. Moreover, such approaches would provide a further inducement for a French rice miller to purchase his rice supplies from U.S. producers rather than from producers in other countries.

It is apparent that six of the most popular magazines would attain approximately the same coverage as the 12 employed in the campaign. Of the remaining six, "Cuisine" magazine showed promise. Although only 9 percent of all respondents had read it, about 12 percent of the readers recalled the advertising. This is a new magazine and probably has not reached maximum circulation. Therefore, since it is a specialized magazine on cooking, consideration should be given to retaining it in future campaigns along with the six most popular magazines, if the cost per 1,000 readers is comparable.

The research on which copy and creative strategy for the advertising campaigns were based consisted only of two group discussions with 12 housewives each. One of the group discussions was held in Paris and the other in a smaller city. The advertising agency had access to household consumption (purchase) data for the various geographic areas of France and knowledge of the wide variation in rice consumption among the various areas but it made little use of this information. The paucity of recall of advertisements for rice in individual magazines--only 16 percent of readers of the most widely read, and from zero to 12.5 percent of readers of others--clearly demonstrates that there is an opportunity for much improvement in the advertisements, as each of the eight most widely read magazines was read by 30 to 43 percent of the respondents.

In contrast to the low recall scores for the rice advertising campaign, a review of recall scores of a sample of 15 test advertisements in U.S. magazines for consumer products and services, revealed that the lowest percentage of readers of a magazine recalling a specific advertisement was 28 percent and the highest was 67 percent. 12/ The advertisements appeared in 11 different magazines and covered a variety of products. Only two of these were food products--molasses and frozen concentrated orange juice. The molasses advertisement appeared as a split-run in one issue of a magazine and was recalled by 45 percent and 34 percent of respondents. 13/ The orange juice advertisements appeared in two issues of another magazine and had 60 and 42 percent recall scores.

It appears that a new approach in creative strategy is needed in the advertising campaign for rice in France, based on findings from surveys of French households. The general theme used in the campaign appears to be satisfactory, since relatively high percentages of respondents noticing rice advertisements recalled that long grain rice was mentioned and associated the advertisements with the United States; moreover, many of them had used one or more of the recipes and were generally pleased with them. Apparently what is needed is a new approach in presenting the materials that will attract and hold the attention of magazine readers.

12/ Recall scores were published in "Which Ad Pulled Best?"--a regular feature of Market/Communications, New York, various issues from 1967 to 1971.

13/ In a split-run issue of a magazine, half the copies carry one advertisement for a product and the other half carry another advertisement for the same product. The subscription list of the magazine is randomly divided into two equal parts so that half the subscribers receive one of the advertisements and the other half receive the other. Followup surveys of samples from each part of the randomly divided subscriber list are made to determine the percentage of readers who recognize and recall the content of the two advertisements.